



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,712	03/04/2002	Nagabhushana Sindhushayana	020180	4802
23696	7590	11/01/2005	EXAMINER	
QUALCOMM, INC 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			ODOM, CURTIS B	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/090,712

Applicant(s)

SINDHUSHAYANA ET AL.

Examiner

Curtis B. Odom

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-10,12-46 and 48-114 is/are pending in the application.
- 4a) Of the above claim(s) 27-45,72-90 and 100-108 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-5,7-10,12-26,46,48-71 and 109-114 is/are allowed.
- 6) ☒ Claim(s) 91-98 is/are rejected.
- 7) ☒ Claim(s) 99 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 91-98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundelin et al. (U. S. Patent No. 6, 144, 861) in view of Bremer et al. (previously cited in Office Action 5/19/2004).

Regarding claim 91, Sundelin et al. does not disclose an apparatus (Fig. 4) for estimating a wireless reverse link maximum data transmit rate, comprising:

an estimator (Fig. 4, column 6, line 65-column 7, line 67) configured to determine at a source of data a quality metric (SIR) of a wireless reverse link between the apparatus and a base station over which data is to be transmitted; and

a combiner (Fig. 4, block 108, column 7, lines 44-67) communicatively coupled to the estimator configured to modify the quality metric by a transmission power margin (TPC).

Sundelin et al. does not disclose a processor block communicatively coupled to the combiner configured to determine a maximum data rate of wireless transmitting data in accordance with the modified quality metric to the base station,

However, Sundelin et al. discloses the modified quality metric determines the transmission power of the base station (column 7, lines 59-67). Bremer et al. discloses determining (column 6, line 64-column 7, line 23) a maximum data rate of data in accordance with a transmission power level. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the device of Sundelin et al. with the teachings of Bremer et al. and determine a maximum rate of data in accordance with the modified quality metric to allow the transmitter to operate at an optimal data rate which would increase data transmission over the transmission period.

Regarding claim 92, which inherits the limitations of claim 91, Sundelin et al. further discloses the estimator comprises a predictor (Fig. 4, block 104, column 7, lines 59-67)

Regarding claims 93-95, which inherit the limitations of claim 92, Sundelin et al. and Bremer et al. do not disclose filtering the quality metric by a linear or non-linear filter, wherein the non-linear filter comprises a peak filter. However, it would have been obvious to one skilled in the art at the time the invention was made to filter the quality metric in order to remove unwanted components from the quality metric to give a more accurate quality metric which would lead to more efficient processing of the quality metric. Thus, claims 93-95 do not constitute patentability.

Regarding claim 96, which inherits the limitations of claim 91, Sundelin et al. further discloses the estimator comprises an open loop estimator (column 6, line 65-column 7, line 15).

Regarding claim 97, which inherits the limitations of claim 91, Sundelin et al. further discloses the estimator comprises a closed loop estimator (column 6, line 65-column 7, line 15).

Regarding claim 98, which inherits the limitations of claim 91, Sundelin et al. further discloses the estimator comprises an open loop estimator (column 6, line 65-column 7, line 15), closed loop estimator (column 6, line 65-column 7, line 15), and a combiner coupled to an open loop and closed loop estimator (Fig. 4, block 108).

Allowable Subject Matter

3. Claims 1, 3-5, 7-10, 12-26, 46, 48-71, and 109-114 are allowable over prior art references because related references do not disclose generating an open loop and closed loop estimate of a quality metric, filtering the open loop and closed loop estimates, summing the filtered open and closed loop estimates, modifying the quality metric by a transmission power margin, and determining a maximum rate of data using the modified quality metric.

4. Claim 99 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hwang et al. (US 2002/0196766) and Zeira et al. (US 2002/0181550) disclose measuring quality metrics and modifying the quality metrics (using open and closed loops).


Art Unit: 2634

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom
October 28, 2005



STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600